

native warm-Season grasses for wildlife



Areas reseeded with native warm-season grass provide good wildlife habitat. Wildlife managers use these grasses to provide nesting, brood rearing, loafing, escape and roosting cover.

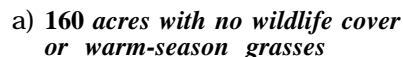
Iowa plantings have dramatically increased nesting success for game birds and songbirds. Pheasants built 20 percent more nests in a switchgrass planting than in an orchard grass alfalfa hay field. Whereas early June haying of the orchard grass-alfalfa field destroyed all pheasant nests, the July haying of the switchgrass field reduced nest losses.

Native grasses also provide a one-to-three foot ground cover that holds up throughout winter, even during heavy snowfall or sleet. This cover has an insulating effect which is extremely important to most wildlife species. The

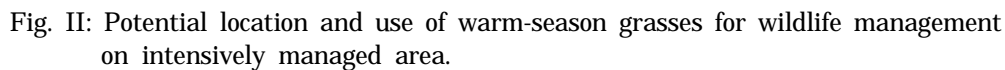
growth pattern of native grasses provides a high percentage of bare ground-necessary for many birds-without causing soil erosion problems. The bare areas provide dusting spots and ease of movement, thereby reducing the energy wildlife must spend in search of seed and pursuit of insects. Rabbit, dove, quail, turkey, pheasant and numerous songbirds find native warm-season grasses suitable nesting cover.

Native grass plantings help to concentrate insects, providing an important food source for wildlife; insects provide high protein young birds require. Turkeys, quail, prairie-chickens, mice and voles also feed on the plant parts and seeds.

Refer to Pond Design Figure II



b) 160 acres showing possible use and location of warm-season grasses



Note: Wildlife habitat management programs should consider native warm-season grasses as a step in manipulating wildlife populations. Additional management and enhancement practices are necessary in order to realize all the benefits to wildlife from native grass plantings. A wildlife habitat management program should provide woody plants and forbs, including native and domestic legumes. Burning and grazing/haying are also necessary.

Planting for wildlife

Cool-season grass pasture borders, roadways, fence rows, dikes and levees, woodland edges, odd corners, draws, around ponds and along crop fields are ideal sites for cover strips. Strips should be from 50 to 200 feet wide (150' is optimum).

Grass strips along woodland edges should be 10 to 20 feet from the forest edge to allow weedy grasses, forbs and native shrubs to grow and provide more diversity between the grass strip and the woodland. Planting a cool-season grass-legume strip beside a native grass strip will provide additional diversity. Odd corners, draws, small fields and pond plantings will vary from 1/4 acre up to 15 acres, depending on the site. Kanlow switchgrass, a very tall, coarse variety of switchgrass provides good wave protection to shorelines as well as wildlife habitat. On erodible sites, mix the natives with specified cool-season grasses and use 1.0 lb/ac. sideoats grama (refer to "Establishing Native Warm-Season Grasses") for faster soil protection and wildlife benefits. See Figs. I and II for potential uses and layouts.

Some woody plants such as wild plum, sumacs, coralberry, dogwood (except flowering) and some oaks are compatible with native grasses and burning management. Many woody species are not compatible with burning. It is best to consider planting woody plants adjacent to, rather than within, native grass strips, in adjoining cool-season grass strips or as blocks rather than rows or single plants (see Figs. I and II).

Managing for wildlife

Recent studies and field observations show that most wildlife use of native grass increases when management involves one or more techniques. Areas left idle will develop an excessive amount of plant litter which retards growth. A few species become dominant when a native grass stand is unmanaged for too long a period. Such stagnant stands are so dense that wildlife cannot enter them, making them unusable for wildlife cover and making it difficult for wildlife species to get to the insects and seeds available in the stand.

The wildlife manager has three techniques for managing native warm-season grasses: grazing, haying or mowing, burning and legume interseeding. Burning is the universal grass-management tool. Even though it may not maintain the best wildlife habitat, it can be used without any other management. The use of grazing or haying requires burning periodically to maintain a productive stand. Overall, you can achieve the best wildlife management by using burning and one of the other techniques.

Grazing

Moderate grazing is an effective tool for managing wildlife habitat. The advantages of grazing include creation of diverse cover heights and densities. Rabbits, ground birds and various rodents often use cow paths as runways. Many grassland birds select sites adjacent to cow paths for nesting. They use large, bare areas around feeders, salt blocks and rubbing posts for dusting, sunning and courtship areas. Moderate grazing also aids in maintaining diverse plant species which, in turn, provide a more dependable wildlife food supply. The disadvantages of grazing are the initial cost of fence construction and the cost of providing water in pasture units. Although overgrazing can be a limiting factor in any given year, the stand will recover if you adjust the stocking rates and grazing season annually. Excluding areas 1/2 to one acre in size in the initial fence building would accommodate those species preferring higher and denser vegetation. These areas also provide cover during heavier than normal grazing of the pasture.

Growing-season grazing creates the best habitat conditions. These habitat conditions will remain until the following growing season. The main purpose of winter or dormant-season grazing is to break up dense and tall cover prior to spring nesting.

Grazing, according to guidelines in "Native grasses for Missouri stockmen," should provide the desired wildlife habitat conditions. If providing wildlife habitat is the primary purpose of the management, reducing the stocking rates by 50 percent the first grazing year and then evaluating the condition of the wildlife habitat will insure against overgrazing initially. Studies show that most grassland birds prefer vegetation 8- 12 inches tall. A general rule of thumb for wildlife managers is to let the grasses get 24 inches tall prior to grazing and to stop grazing when the stubble reaches an average of 12 inches tall. Allow 45 to 60 days before regrazing.

Haying and mowing

Native grasses should be cut for hay in early July, after the nesting season of most birds and early enough to allow good regrowth prior to frost. Do not cut grass closer than four inches as that allows the grass to make a much quicker growth response and thus maintains a healthier stand. Remove bales as soon as possible to avoid killing spots and disturbing renesting wildlife.

The best use of haying is on areas larger than 15 acres where 1/3 to 1/2 of the area can be hayed on rotation each year. Haying 1/3 each year will yield good quality hay if the unit to be hayed in July is burned the preceding April. You also can use rotation haying on strip plantings. Rotary mowing is less desirable since it causes heavy buildup of dead plant material.

Haying and mowing don't always control cool-season grasses and woody plants. Although some cool-season grasses and woody plants may be desirable for diversity, they eventually will dominate an unmanaged stand. The more space cool-season grasses take, the less open ground remains for annual forbs and movement of wildlife.

Burning

Burning is important for proper management of native grasses. Managing stands with grazing and/or haying still requires burning periodically to maintain vigorous growth and desired plant composition. Burning complements grazing by smoothing out uneven grazing. Prescribed burns stimulate native warm-season grass growth, increase seed germination and growth of broadleaf plants, create open ground for wildlife, retard non-native plant species and keep maintenance costs low. Prescribed burns also help reduce the danger of wildfires by removing dead plant material.

On the average, native grass stands should be burned on a three-to-four-year rotation, leaving $\frac{1}{3}$ to $\frac{1}{4}$ of the area unburned each year. It is important to burn a stand before it becomes unattractive to wildlife. A lack of open ground and a reduction in the number of flowering stems of broadleaf plants indicates a stagnating stand. When this occurs, it will be difficult for you to walk through the stand and to part the litter to reveal bare ground. This condition will occur in two to five years, depending on soil depth and moisture.

A good rule of thumb is to burn when the bluestems' spring growth reaches about an inch high-about April 1st. This growth varies as much as two weeks across Missouri. To maintain the best plant and animal habitat conditions, burn two weeks earlier or up to two weeks later on a given site every third to fourth burn. Varying the burn date increases plant diversity for wildlife since early burns

favor broadleaf plants and later burns favor warm-season grasses.

There are several disadvantages to poorly planned or uncontrolled burns. Fire, at the wrong time, can accelerate soil erosion and destroy early nests or even broods. Fires which escape as a result of either accident or inexperience can damage non-target habitat for several seasons and destroy private property. Grassland fires can move faster than a man can run and can jump interstate highways during high winds. Those familiar with hardwood-timber forest fires often do not realize the highly combustible nature of prairie fields. However, properly planned burns may be conducted with relative ease. Contact your local Soil Conservation Service office for guidance on grassland burning.

Note: The best safeguard is to plan for the use of burning when establishing native warm-season grasses. Fire lines or low-combustible fuels adjacent to the native grasses provide a margin of safety. A good rule to follow is to burn only when a person skilled in the use of fire is directing the operation. With prior planning and proper execution of a prescribed burn, fire becomes a tool to use rather than a menace to fear.

Other native grass brochures available from the Department of Conservation:

- ❖ Native grasses
- ❖ Establishing native warm-season grasses
- ❖ Native warm-season grasses for Missouri stockmen